

REMARKS

This is in response to the Office Action dated December 18, 2008 and the Advisory Action dated March 9, 2009. Claims 1-20 were pending. Independent claims 1 and 10 have been amended. New claims 21-23 have been added. No new matter has been added. Upon entry of the amendments herewith, claims 1-23 are pending. Reconsideration of the pending claims is respectfully requested in light of the discussion herein.

I. Telephone Interview Summary

A telephone interview was held between Thomas J. Satagaj, an attorney at Seed Law Group, and Examiner Stiglic on March 18, 2009. An Interview Summary form PTOL-413 mailed on March 23, 2009 indicated that the present amendment/response must include "the substance of the interview." Accordingly, the substance of the interview is provided below:

Mr. Satagaj and Examiner Stiglic discussed the cited references and certain features in the claims, such as he "host controller" limitation and the requirement of acting only as a slave on the memory bus, by telephone on March 18, 2009. No agreement on the allowability on the claims was reached in the telephone conversation.

II. Request for Continued Examination

A Request for Continued Examination (RCE) is filed concurrently with this Amendment so that the final Office Action mailed December 18, 2009 is effectively made non-final. Under 37 U.S.C. 1.114, the effect of the RCE, which makes the instant Office Action non-final, is to cause examination of the instant application to remain open. Accordingly, amendments submitted herein are to be entered as a matter of right, and each claim is entitled to continued examination, particularly with respect to the responses provided herein.

III. Rejections under 35 U.S.C. § 103(a)

The final Office Action and Advisory Action maintained rejections of all claims under 35 U.S.C. § 103(a) as allegedly unpatentable over *Wang et al.*, (U.S. Appl.

2002/0116565), hereinafter *Wang*, in view of **Hamdi et al.**, (U.S. Pat. 6,912,651), hereinafter *Hamdi*.

a. Independent Claim 1

Independent claim 1 recites, *inter alia*, “a first interface for direct connection to a memory bus which connects the host microprocessor and the system memory.” Claim 1 has been further amended to recite the “internal memory having a plurality of locations mapped in the host microprocessor.” Accordingly, the internal memory of the host controller has an address space mapped in such a way that the internal memory is directly accessible by the host microprocessor. In this way, the host microprocessor may read data from and write data to the host controller internal memory via the direct connection of the internal memory through the first interface. Support for this feature is found in the International publication of the present application, WO 2004/102406 A1, at least in Figures 2 and 3 and on Page 4, Lines 18-22. Neither *Wang* nor *Hamdi*, alone or in any motivated combination, show this feature.

In *Wang*, memory transactions are triggered via an interrupt asserted by the host controller. *Wang*’s host microprocessor acts on the interrupt and proceeds to copy data between system memory 32 and batch memory 30. See *Wang*’s FIG. 1A and Para. [0042-0043]. There is no indication that *Wang*’s host controller 22 and his host microprocessor 24 share any memory address space. Figure 6 in *Wang* illustrates a memory map of *Wang*’s host controller batch memory, but this memory address space is not mapped to *Wang*’s external host microprocessor 24. In fact, there is no indication that *Wang*’s host controller 22 has any internal memory having a plurality of locations mapped to the host microprocessor 24. For at least these reasons, claim 1 is allowable over *Wang*.

Standing alone, *Hamdi* does not supply the missing features of claim 1 to cure the deficiency of *Wang*. *Hamdi* is a conventional USB system that merely provides for host controller 608 to master bus 604 and access RAM 606. See *Hamdi*’s FIG. 6 and Col. 11, lines 41-64. There is no indication that *Hamdi*’s host controller 608 and his microprocessor 602 share any memory address space in different memory devices. Further, there is no indication that

Hamdi's host controller 608 has any internal memory having a plurality of locations mapped to the microprocessor 602. Accordingly, claim 1 is allowable over *Hamdi*.

In addition to the reasons that claim 1 is allowable over the individually cited references, claim 1 is further allowable over a combination of *Wang* and *Hamdi*. Claim 1 is allowable over a *Wang* and *Hamdi* combination for at least two reasons. First, *Wang* and *Hamdi* could not be joined in such a way as to form operable device. Even if the direct connection of *Hamdi* were integrated into the structure of *Wang*, neither reference discloses, teaches, or suggests any mechanism to prevent bus collisions. To avoid bus collisions, the Advisory Action informs that the direct connection of *Hamdi* is to be incorporated into *Wang*, but none of the functionality of *Hamdi* is to be brought with direct connection. That is, the Advisory Action states the "Examiner is not relying on the functionality of the host controller of *Hamdi* in any way." Instead, the Advisory Action relies on *Wang's* paragraph [0138] for the proposition that "the system bus is ONLY controlled by the host." (emphasis in original) By this reasoning then, *Wang* has no teaching for use of a direct connection, and the only mechanism for using the direct connection of *Hamdi* is the bus mastering ability of *Hamdi*. The *Wang* invention uses the host to control the system bus, but *Wang* accomplishes this through the host controller, and not via a direct connection. Thus, for at least the first reason that the direct connection would be inoperable, claim 1 is allowable over the combination of *Wang* and *Hamdi*.

Assuming, arguendo, that addition of *Hamdi* to *Wang* created an operable device, claim 1 is still allowable over the combination for at least the second reason that the created device fails to disclose, teach, or suggest all of the features of amended claim 1. For example, the *Wang* and *Hamdi* combination would still not have a host controller comprising an "internal memory having a plurality of locations mapped in the host microprocessor." There is simply no indication in either *Wang* or *Hamdi* that memory mapped space is present. As described above, neither *Wang* nor *Hamdi* individually disclose, teach, or suggest mapping, and there is nothing further to suggest that the combination of *Wang* and *Hamdi* does either. Accordingly, claim 1 is allowable.

b. Independent Claim 10

Claim 10 has been amended with a similar recitation as amended claim 1. It is further apparent that even though the language of claim 10 is not identical to that of claim 1, the nonobviousness of claim 10 will be apparent in view of the above remarks. For example, claim 10 recites, *inter alia*, an internal memory having “a plurality of locations mapped in the host microprocessor.” As discussed above, neither *Wang* nor *Hamdi*, alone or combined, have a host controller with memory including a plurality of locations mapped in a host microprocessor. Accordingly, claim 10 is in condition for allowance.

c. Independent Claim 23

New independent claim 23 recites, *inter alia*, “configuring the host controller as a slave on a memory bus, the memory bus directly connected to the host controller, a host microprocessor, and a system memory,” and “configuring address space of an internal memory to be mappable in the host processor, said address space accessible via the memory bus.” As discussed herein, none of the cited references permit configuration of a host controller as a slave on the memory bus such that an internal memory of the host controller is mappable in the host processor. Claim 23 is thus in condition for allowance.

IV. Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim. If the attorney of record (Thomas J. Satagaj) has overlooked a teaching in any of the cited references that is relevant to the patentability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact Mr. Satagaj at (206) 622-4900.

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The Director is authorized to charge any additional fees due by way of this Amendment only, or credit any overpayment, to our Deposit Account No. 19-1090. Reconsideration of the present application in view of the foregoing amendments and the following remarks is respectfully requested. A Notice of Allowance is earnestly solicited.

Respectfully submitted,
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